



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,345	10/09/2003	Jerome Swartz	482XYXA	8793
156	7590	10/05/2004	EXAMINER	
KIRSCHSTEIN, OTTINGER, ISRAEL & SCHIFFMILLER, P.C. 489 FIFTH AVENUE NEW YORK, NY 10017			LEE, DIANE I	
			ART UNIT	PAPER NUMBER
			2876	

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/682,345

Applicant(s)

SWARTZ ET AL.

Examiner

D. I. Lee

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-22 and 25-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-22 and 25-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) ☐ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413) |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) ☐ Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) ☐ Other: _____ |

DETAILED ACTION

1. Receipt is acknowledged of the Amendment filed 08 July 2004. Claim 1 has been amended; claims 1-17 (i.e., previously canceled) and 23-24 have been canceled; and no claims have been newly added. Currently, claims 18-22 and 25-31 are pending in this application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. **Claims 18-22 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kahn et al. [US 5,600,121-referred as Kahn] in view of IEEE [Optical Raster Scanning Display Based on Surface-Micromachined Polysilicon Mirrors].**

Re claims 18 and 28: Kahn discloses a portable instrument for projecting a light beam in a display mode of operation, and for selectively electro-optically reading indicia in a reading mode of operation, comprising:

- (a) a housing 10 includes a window 12 (see figure 3);
- (b) an electro-optical assembly supported by the housing, for reading the indicia during the reading mode, and for projecting a light beam on a viewing surface during the display mode, i.e., the assembly includes a light source for generating a single color of light beam and projecting the light beam on a viewing surface during the display mode for aiming purpose (see col. 4, lines 20+; col. 5, lines 2+; and col. 6, lines 57+) and controller for causing the light beam to be aimed at selected position in the paths to be illuminated during the display mode;
- (c) a mode selector (a triggering switch 40) for selecting one of the mode (see col. 10, lines 14+ and figure 3).

Although Kahn teaches the portable instrument projecting the light beam through a window 12 which the light beam pass on a viewing surface during the display mode, he does not teach the portable instrument projecting a bit-mapped two-dimensional image having a light pattern of illuminated pixels and non-illuminated pixels on the area during the display mode by pulsing the light source.

IEEE discloses a chip sized raster-scanning display system based on pairs of orthogonally scanning operation for projecting the bit-mapped two-dimensional pixel image having a light pattern of illuminated pixels and non-illuminated pixels on the area by pulsing the light source on and off via an acoustooptic modulator while the beams are swept over each of the light path on a viewing surface during the display mode, i.e., the acoustooptic switches the light on and off with a signal that is synchronized to mirror driving voltage (see the figure 7a, 7b, 8).

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the small sized raster-scanning display system as taught by IEEE in the portable

Art Unit: 2876

instrument of Kahn in order to extend the projection capability the instrument. Such modification would have provided Kahn with a portable instrument that can scan the indicia and project a two-dimensional color image in addition to an aiming image. Such modification would have been an obvious extension of the projecting capability, thus greatly increase the utilization of the portable instrument.

Re claim 19: Kahn teaches the housing 10 of the portable instrument having a size and a shape configured to be held in a user's hand during both the display and reading mode (see figure 2b).

Re claim 20: wherein the assembly includes a reader having a light source 16, 20 for generating a visible laser beam, a light sensor 26 having a field of view and operative for detecting light from the indicia, and a scanner for scanning at least one of the light beam and the field of view (see figure 3).

Re claims 21-22: wherein the indicia is a bar code symbol (i.e., machine-readable symbol) or other indicia, such as alphanumeric characters over which at least one of the light beam and the field of view is scanned, and wherein the sensor 26 is operative for capturing the indicia and generating an electrical signal corresponding to the symbol, and wherein the reader includes a signal processor 28 for processing the signal to data indicative of the symbol (see col. 9, lines 51+ and figure 3).

5. **Claims 25-27 and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kahn as modified by IEEE as applied to claim 18 above, and further in view of Kajiki [Autostereoscopic 3-D Video Display Using Multiple Light Beams with Scanning, IEEE Transactions on circuits and System for Video Tech. Vol. 10, No. 2, March 2000-referred as Kajiki].** The teachings of Kahn as modified by IEEE have been discussed above.

Kahn as modified by IEEE teaches the housing having a window (located at one end of housing) through which the light beams and the bit-mapped image is projected through the window. Further, IEEE teaches that the raster-scanning display system includes an energizable laser for projecting a laser beam toward the target and provides a raster pattern of scanning lines that covers an area of the viewing surface,

Art Unit: 2876

and wherein the scanner includes a first scan mirror (a fast circular mirror) for horizontal scanning (sweeping the laser beam along a first direction over the target) and a second scan mirror (a slow circular mirror) for vertical scanning (sweeping the laser beam along a second direction orthogonal to the first direction over the target). The mirrors are nearly circular so that each mirror provides angular distances wherein the first angular distance is greater than the second angular distance (3 cm horizontal by 2.8 cm vertical raster scan is presented) (see 1st-4th paragraphs). Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the specifics of the raster scanning structure of IEEE in the portable instrument of Kahn in order to provide a stable projecting of the bit-mapped image.

Kahn as modified by IEEE does not teach the laser beam of different colors (i.e., a plurality of laser sources for generating a different wavelengths of laser beams).

Kajiki teaches a display system having a laser diode with green and blue diodes to provide the natural color images (see page 259, section VI). Wherein each color obviously produces different wavelengths of laser beams.

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate a plurality of laser sources for generating a different wavelengths of laser beams in system of Kahn as modified by IEEE in order to provide natural color image to enhance the image quality.

6. **Claim 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kahn as modified by IEEE and Kajiki as applied to claim 18 above, and further in view of Plesko [US 5,506,394].** The teachings of Kahn as modified by IEEE and Kajiki have been discussed above.

Although Kahn as modified by IEEE and Kajiki teaches the housing having a window located at one of the end regions and the bit-mapped image is projected through the window, Kahn as modified by IEEE does not teach the housing is elongated and extending along an axis between opposed end regions.

Plesko discloses a stylus beam scanning device for utilizing as a bar code scanning device (see the abstract). The indicia reader/scanner housing having a size and shape configured to be held in a user's hand during reading mode (see figure 1). Plesko shows the scanner having a light source (i.e., a laser for generating and directing the light beam as a visible laser beam along an optical path), and a manually actuatable trigger 2 (see figures 1-5). When scanning the indicia, the light transmissive element of the housing faces the indicia and the light directed by the laser light source passes in one direction through the element and the reflected light passes in an opposite direction through the element to be detected by the light sensor having a field of view (see figures 7-8), and for generating an electrical signal indicative of the detected light (see col. 17, lines 9+). The light enters and exits through the window 6, 7, which is located at the front end 16A of the scanner (see figure 7). The housing is elongated and extending along an axis between opposed end regions, the window is located at one of the end regions the light is projected through the window (see figures 1-7). The reader comprising a detector 14 for detecting the light that reflected off the coded indicia and for generating an electrical signal indicative of the detected light intensity (see col. 17, lines 9+). Plesko further discloses the reader having a processor 35 for decoding the electrical signal into data represented by the coded indicia, a memory for storing the data within the housing (see col. 16, lines 9-16; col. 18, lines 1-8), a scanning module 100 as a drive supported by the housing for scanning the emitted laser light beam across the target (see col. 16, lines 27+ and figure 8). Plesko further discloses that the stylus beam scanning device can be utilized as a laser pointer (see col. 18, lines 14). The scan module drive for moving the laser light beam along a path outwardly of the housing towards the target and producing a beam pattern (e.g., a spot, a line, or an elliptical scan

Art Unit: 2876

pattern) on the target when in a pointing mode in which a visual display is created on the target (see col. 18, lines 14+).

In view of Plesko's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to provide an elongated housing in the portable instrument of Kahn as modified by IEEE to in order to provide a stylus shaped housing that is easily held by the user and to increase a comfort level when operating the instrument.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. **Claims 18-22 and 25-31 are remain rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-34 of U.S. Patent No. 6,119,944 in view of Kahn, IEEE, and Plesko.** The teachings of Kahn, IEEE, and Plesko have been discussed above.

Applicant's claimed limitation is found in the Patent'944 except for the device having a mode switch for selecting a display mode which the device projecting the bit-mapped two-dimensional image during the display mode. Kahn as modified by IEEE, and Plesko teaches the device projecting an image during the display.

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the teachings of Kahn, IEEE, Kajiki, and Plesko in the system of Patent'944 in order to provide an image projecting feature combined with reading capability.

9. **Claims 18-22 and 25-31 are remain rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 6,655,597 [referred as Patent'597] in view of Kahn.** The teachings of Kahn have been discussed above.

Applicant's claimed limitation are found in the Patent'597 except for reading feature which selectively electro0optically reading indicia in a reading mode.

Kahn teaches the claimed reading feature (see the discussion above).

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the reading feature to provide a dual operability in one device.

Response to Arguments

10. Applicant's arguments filed 7/8/04 have been fully considered but they are not persuasive.

11. In response to applicant's argument with respect to IEEE reference doe not discloses or suggest the light source pulsed on and off while beam is sweep over the light paths and that from the caption of Fig. 10 of IEEE states that the images were created on film with the assistance of a mechanical shutter and an acousto-optic modulator, as depicted in Fig. 9 (see applicants argument on page 6, lines 4+); the examiner respectfully disagrees. IEEE discloses a chip sized raster-scanning display system based on pairs of orthogonally scanning operation for projecting the bit-mapped two-dimensional pixel image having a light pattern of illuminated pixels and non-illuminated pixels on the area by pulsing the light source on and off via an acoustooptic modulator while the beans are swept over each of the light path on a viewing surface during the display mode, i.e., the acoustooptic provides the light source pulsed on and off

by switching the light on and off with a signal that is synchronized to mirror driving voltage (see page 71-72 and the figure 7a, 7b, 8). Thus, applicant's argument on this point is not persuasive.

12. With respect to applicant's reconsideration of the double patenting rejection over U.S. Patent No. 6,655,597 the instant application is a continuation of '597 patent and, hence, the double patenting rejection is improper; the examiner respectfully disagrees. The examiner recognized that, generally, a double patenting rejection is not permitted where the claimed subject matter is presented in a divisional application as a result of a restriction requirement made in a parent application under 35 U.S.C. 121, the fact that the instant application is a **continuation** of U.S. Patent No. 6,655,597, a double patenting rejection is permitted. Thus, applicant's argument on this point is not persuasive. Accordingly, the examiner maintains her position.

13. Applicant requested to reconsider of the double patenting rejection over U.S. Patent No. 6,119,944 since the main claim thereof relates to a marking instrument that also collects data for subsequent downloading and that the main claim of the instant application does not recite any means for marking or any means for downloading data, rather, the instant application recites a projector and a mode selector, both of which are not claimed in the '944 patent (see page 6, lines 15+). In the double patenting rejection, the examiner previously stated that Applicant's claimed limitation is found in the Patent'944 except for the device having a mode switch for selecting a display mode which the device projecting the bit-mapped two-dimensional image during the display mode because the examiner recognized that the instant application recites a projector and a mode selector, both of which are not claimed in the '944 patent. Thus, applicant's argument on this point is not persuasive. Accordingly, the examiner maintains her position.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. I. Lee whose telephone number is (571) 272-2399. The examiner can normally be reached on Monday through Thursday from 5:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 2876

A handwritten signature in black ink, appearing to read "D. I. Lee".

D. I. Lee
Primary Examiner
Art Unit 2876

D. L.